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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,065

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Magnus Wiethoff

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SMITH LAW OFFICE

8000 EXCELSIOR DRIVE, SUITE 301

MADISON, WI 53717

EXAMINER

SHABMAN, MARK A

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,065	<b>Applicant(s)</b> WIETHOFF ET AL.	
	<b>Examiner</b> MARK SHABMAN	<b>Art Unit</b> 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 25-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/23/2008, 10/10/2008</u> .                                   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: in figure 5 - 102, 108 and 123. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 7, 16 and 20** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which

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was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding **claim 7**, the specification does not disclose how the "boundary locating routine" is used to determine objects as there is no indication as to how the boundary locating routing functions.

Regarding **claim 16**, the specification does not provide details as to how "gradient formation" would be used in conjunction with the physical quantities, or what benefit it would serve. It is also unclear as to what "gradient formation" means in this context as no description of the process is provided.

**Claim 20** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding **claim 20**, the "acquisition unit" as claimed is not found in the specification with detail. There is no reference as to what the acquisition unit comprises or how it operates.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 10, 21, 24** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **claim 10**, the claim recites the limitation of "the lightness" however it is unclear as to what this refers to as the lightness has not been previously disclosed and does not correspond to a specific element of the claim.

Regarding **claim 21**, the limitation of "the measuring surface" lacks antecedent basis as it has not been previously disclosed in the claims.

Regarding **claim 24**, the limitations of "the frequency of individual object types" and "the different object types" lack antecedent basis as the "object types" and their identification has not been previously disclosed. Claim 1 discloses detecting an object but does not disclose identifying different object types.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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**Claims 1, 2, 8, 9, 10, 12, 13, 17, 18, 21, and 22** are rejected under 35 U.S.C. 102(e) as being anticipated by Oosterling US Patent 6,578,516 B1 (hereinafter referred to as Oosterling).

Regarding **claim 1**, Oosterling discloses a method and apparatus for determining milk quality during the milking process wherein a sample is filtered through filter 7 and examined via camera 6 to detect at least one object such as blood or flakes based on an object recognition rule of analyzing the filter for any potential hazardous objects (column 2).

Regarding **claim 2**, the filter of Oosterling is used to extract at least one object from the milk as claimed.

Regarding **claim 8**, column 2 of Oosterling describes specifying one parameter for detection such as color in contrast to the color of the filter.

Regarding **claim 9**, the parameter is captured optically via camera means 6.

Regarding **claim 10**, the parameter identified by Oosterling is derived by the lightness in contrast to the dark filter as described in column 2.

Regarding **claim 12**, the contrast of the contamination caught on the filter in relation to the color of the filter is used to determine if a problem exists as described in column 2. Further, the use of a UV or IR light to increase the contrast between the two is described in column 3.

Regarding **claim 13**, the color of the contamination (i.e. blood) is used to determine contamination in the apparatus of Oosterling.

Regarding **claim 17**, Oosterling describes using a limit value to determine contamination of a sample, which reads on the characteristic value as claimed.

Regarding **claim 18**, the light 5 of Oosterling is used to help identify the parameters which are to be detected as claimed.

Regarding **claim 21**, Oosterling discloses a buffer chamber 15 which is used to hold a predetermined amount of milk and comprises a filter 9 on which a film is formed when contamination is present.

Regarding **claim 22**, the objects are "isolated out of the sample" in Oosterling by filter 9 which prevents their passage.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3-7, 11, 14-16, 19, 20, 23 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosterling.

Regarding **claim 3 and 5**, the disclosure of Oosterling describes situations in which the chamber overflows with bubbles in column 3 and the actions taken to control such an occurrence. When seen through the camera, it would have been able to tell the difference between a potential blood particle object and a bubble "non-particle object" as claimed. Thus, a distinction could easily be made.

Regarding **claim 4**, one of ordinary skill in the art would be able to tell the difference between a biological particle such as blood and a mineral particle such as metal shavings from the machine simply by viewing the filter and any particulate caught in it.

Regarding **claim 6**, the apparatus of Oosterling identifies a portion of interest when there appears a contamination in the system such as blood on the filter. When identifying such an object, a characteristic such as color is identified as claimed.

Regarding **claim 7**, one of ordinary skill in the art at the time of invention would be able to take the image of the filter as described in Oosterling and perform a "boundary locating routine" by viewing the image and determining based on the boundaries of any contamination, what the contamination is and its extent. As discussed in column 3, the milk is to be classified based on its quality and thus any visible problems seen would be beneficial for such classification.

Regarding **claim 11**, one of ordinary skill in the art at the time of invention would be able to take the image of the filter as described in Oosterling derive from the entrapped particles a parameter based on the "outer contour of an object" as claimed. For example, viewing the filter could produce an image of a hair which would be identified by its shape and outer contour.

Regarding **claim 14**, Oosterling describes using both color and contrast to determine whether contamination is present or not in the milk under test. It would have been obvious to one of ordinary skill in the art at the time of invention to have used both at the same time to determine whether an object such as blood was present or not.



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Regarding **claim 15**, as with the rejection of claim 14, two parameters are determined in the method of Oosterling. It would have been obvious to one of ordinary skill in the art at the time of invention to have used these parameters to determine what object was caught in the filter, including using fuzzy logic. For example: if the color of the object is A and the contrast is B, then the object is C.

Regarding **claim 16**, the apparatus and method of Oosterling teaches analyzing the filter element with camera 6 to determine the quality of the milk. Elements such as Hue and intensity would be present in such analysis and one of ordinary skill in the art would be able to apply a "gradient formation" to the results as this is seen as a simple data manipulation.

Regarding **claim 19**, column 3 of Oosterling describes using the analysis method for removal or separation of milk samples. If the quality is determined to be below an acceptable limit, it would have been obvious to one of ordinary skill in the art at the time of invention to have discarded the sample or removed it from the marketable milk as it could cause potential health problems.

Regarding **claim 20**, Oosterling describes a method in which a predetermined amount of milk is routed into a measuring chamber 15 which has an acquisition unit 6, part of the liquid phase of the milk is drained out through drain 16 as it passes through and at least a portion of the measuring chamber is captured by acquisition unit 6 for analysis.

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Regarding **claim 23**, as the objects such as blood are collected in the filter of Oosterling, the frequency of the individual objects is determined since the system is operating over time.

Regarding **claim 24**, column 1 of Oosterling describes determining the quality of the milk being processed and stored in different containers. It would have been obvious to one of ordinary skill in the art at the time of invention to have classified the different storage tanks based on the amount of contamination or the frequency of the object types found in each sample.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK SHABMAN whose telephone number is (571)270-3263. The examiner can normally be reached on M-F 8:00am - 4:30pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. S./

Examiner, Art Unit 2856

/Hezron Williams/

Supervisory Patent Examiner, Art Unit 2856